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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,801	08/05/2003	Kotaro Terada	393032039800	8825

7590 02/22/2007  
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EXAMINER
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SUTHERS, DOUGLAS JOHN

ART UNIT	PAPER NUMBER
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2615

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/635,801		TERADA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Douglas Suthers		2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>05/09/06</u> . | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2615.

### ***Specification***

2. The abstract of the disclosure is objected to because it is greater than 150 words.

Correction is required. See MPEP § 608.01(b).

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. Claim 11 is objected to because of the following informalities: Claim 11 looks like it should be dependent on claim 10 instead of 9 and will be treated as such in this office action. It is unclear whether claim 10 should also be dependent on claim 9.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

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5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 refers to "a second signal processing section" without expressly referring to a first signal processing section.

8. In the 3<sup>rd</sup> paragraph of claims 1 and 13 it is unclear what group "the plurality of input channels" is referring to. In the 4<sup>th</sup> paragraph it is unclear what is to be mixed.

The following is a possible revision:

"an exclusion setting step of setting a particular input channel, from the plurality of input channels, to be excluded; and

a second signal path setting step of making a setting such that the signals of the one or more input channels selected via said first signal path setting, having the signal of the particular input channel set by said exclusion setting step excluded therefrom, are mixed into a second output channel of the plurality of output channels."

### ***Claim Rejections - 35 USC § 101***

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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Claim 13 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. "A program" is not statutory subject matter.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Davis (US 5454041).

12. Regarding claim 1, Davis discloses a mixing signal-path setting apparatus for making a setting such that signals of one or more input channels selected from among a plurality of input channels are mixed into at least one of a plurality of output channels, said mixing signal-path setting apparatus comprising:

a first signal path setting section (Figure 3, mix/assign pins 138) that selects one or more input channels from among the plurality of input channels and makes a setting such that signals of the selected one or more input channels are mixed into a first output channel (figure 2, to item 26) of a plurality of output channels;

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an exclusion setting section (direct/mix-minus select pins 110, and associated circuitry) that sets a particular input channel to be excluded from the plurality of input channels; and

a second signal processing section (switch 200, node 288, 232 and surrounding circuitry) that makes a setting such that the signals of the one or more input channels selected via said first signal processing section and having the signal of the particular input channel, set by said exclusion setting section, excluded therefrom are mixed into a second output channel (to item 34) of the plurality of output channels.

13. Regarding claim 2, Davis discloses an apparatus that further comprises an output channel setting section (interface of 10 in figure 2) that sets, as said second output channel, a given one of the plurality of output channels other than said first output channel (two different output channels).

14. Regarding claim 3, Davis discloses wherein said exclusion setting section (138) selects the particular input channel to be excluded from the plurality of input channels and cuts the signal (node 288) of the selected particular input channel so as to prevent the signal of the selected particular input channel from being led to said second output channel.

15. Regarding claim 4, Davis discloses wherein said exclusion setting section selects the particular input channel (the channel of the I/O module) to be excluded from among

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the plurality of input channels and lowers the signal of the selected particular input channel to a small level so as to allow the signal of the selected particular input channel to be mixed into said second output channel at a small level (at node 288).

16. Regarding claim 5, Davis discloses further comprising a mixing processing device (figure 2 item 12) that performs mixing processing on audio signals inputted via the input channels and outputs the audio signals, having been subjected to the mixing processing, to the output channels.

17. Regarding claim 6, Davis discloses wherein said first signal path setting section includes a plurality of switches (figure 2 items 20, and 22), provided in corresponding relation to the plurality of input channels, for making settings such that the signals of the input channels are mixedly outputted to a predetermined first output channel, and, in accordance with the settings made by said switches, the signals of the input channels corresponding to said switches are set to be mixed into said predetermined first output channel, and

where said second signal path setting section includes a branch (switch 200, node 288, 232 and surrounding circuitry) for branching the signals of the input channels, having been set via said switches to be mixed into said predetermined first output channel, and the signals of the input channels, having the signal of the particular input channel excluded therefrom by means of said branch, are mixed into a predetermined second output channel of the plurality of output channels.

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18. Regarding claim 7, Davis discloses wherein said first output channel comprises a predetermined pair of mixing buses (144, 288),

wherein said first signal path setting section includes a plurality of switches (figure 2 items 20, and 22), provided in corresponding relation to the plurality of input channels, for making settings such that the signals of the input channels are outputted to said predetermined pair of mixing buses, and, in accordance with the settings made by said switches, the signals of the input channels corresponding to said switches are set to be mixed into said predetermined pair of mixing buses, and

where said second signal path setting section includes a branch (switch 200, node 288, 232 and surrounding circuitry) for branching the signals of the input channels, having been set via said switches to be mixed into said predetermined pair of mixing buses, to one of the mixing buses, and the signals of the input channels, having the signal of the particular input channel excluded therefrom by means of said branch, are mixed into the one mixing bus (288).

19. Regarding claim 8, Davis discloses wherein said exclusion setting section mixes respective signals of the plurality of input channels into said second output channel via level adjusting devices (206, faders, and associated op-amps), and a signal level of a desired one of the input channels is suppressed via the level adjusting device of the desired input channel so that the desired input channel is set as the particular input channel to be excluded.



20. Regarding claim 9, Davis discloses wherein said second signal path setting section adjusts the signals of the input channels, other than the particular input channel to be excluded, to predetermined levels (given by position of faders) and then mixes the adjusted signals into said second output channel.

21. Regarding claim 10, Davis discloses an apparatus which includes a section that provides a visual display (figure 2, user interface of 10) to be used for setting various parameters for mixing signal paths.

22. Regarding claim 11, Davis discloses where, when the various parameters are to be set via the display, said second signal path setting section automatically performs a switching operation necessary for mixing the signals of the input channels (via console 10), having the signal of the particular input channel excluded therefrom, into said second output channel, and said second signal path setting section also automatically performs necessary signal level adjustment (via faders) in connection with the switching operation.

23. Regarding claim 12, Davis discloses an apparatus which further comprises a storage section (figure 2, memory on bottom) that stores information indicative of at least a portion of the settings made by said first signal path setting section, said exclusion setting section and said second signal path setting section, and wherein the

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information stored in said storage section is read out to reproduce at least a portion of the settings made by said first signal path setting section, said exclusion setting section and said second signal path setting section (column 3 lines 60-67).

***Claim Rejections - 35 USC § 103***

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. Claims 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis (US 5454041).

26. Regarding claim 13, claim 13 is rejected in an analogous manner to claim 1 as above. Although Davis does not expressly disclose the use of a computer program, it was well known that general-purpose computers could be used to perform signal processing or circuit simulation. The motivation for using such would have been cheaper, faster implementation and reuse of resources. Therefore it would have been obvious to one of ordinary skill in the art to perform the operations on a computer via a program stored on a computer readable medium.

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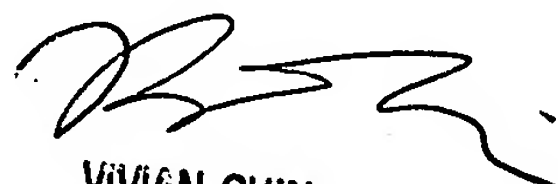
**Conclusion**

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas Suthers whose telephone number is (571)272-0563. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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